

# TECHNICAL INFORMATION

## SOVIET BLOC SKS CARBINE

---



### Specifications:

**Weapon nomenclature - Samozariadnyia Karabina Simonova (SKS)**

**System of operation - Gas, Semi-automatic fire only**

**Bolt type - one-piece, tipping, rear-cocking**

**Weight (loaded) - 8.8 lbs.**

**Length, barrel - 20.34 inches**

**Length, overall - 40.16 inches**

**Feed device - 10-round, fixed, staggered double-row box magazine**

**Sights, front - Hooded post**

**Sights, rear - Tangent leaf, graduated from 100 to 1000 meters**

**Cartridge - 7.62 x 39 Soviet M43 (Type PS ball)**

**Muzzle velocity - 2411 fps**

**Bullet weight - 122 gr.**

**Working pressure - 45,000 psi**

**Bore diameter - .301 inches**

**Groove diameter - .311 inches**

**Direction & rate of rifling twist - Right, 1 turn in 9.45 inches**

### Design History:

The SKS was adopted by the Soviet Union in 1946, and is the basis for the later AK series of weapons. It is a gas-operated, semi-automatic rifle and might be referred to as a miniature version of the 14.5mm PTRS semi-automatic antitank rifle used during World War 2. Both the SKS and the PTRS were designed by the famed Russian arms inventor Sergei Simonov. Because of its light recoil and moderate weight, 35 rounds per minute of aimed fire can be achieved.

Unlike its predecessor, the Tokarev, the SKS features an instantly dismountable gas system. The gas cylinder is an integral part of the handguard and contains the piston rod. The front end of the combined gas cylinder and handguard fits over a gas port housing pinned to the barrel approximately 7 inches from the muzzle. The rear end butts against the rear sight base which contains the tappet rod and tappet rod return spring. The latch

located on the right side of the sight serves to lock the handguard-gas cylinder into place. Its removal for field maintenance takes less than three seconds.

In the 1950's, Soviet technical advisors helped the Chinese government to establish several factories to produce the SKS carbine. The first Chinese SKS carbines were identical to their Soviet counterparts, and were adopted by the Peoples Republic of China as the Type 56 carbine. Subsequently, the Chinese have manufactured several varieties of the original SKS, including selective-fire models, short-barreled "paratrooper" models, and models which use the detachable magazine of the later AK-47 assault rifle.

As the general availability of the AK-47 improved in the early 1960's, the SKS was relegated to the category of a secondary military arm in both the USSR and in the PRC. However, stockpiles of millions of SKS carbines are maintained for the "Peoples Militias" (strategic reserve) and for export to the third world countries as "military aid".

### **Operation:**

When the rifle is fired, gas enters the gas port housing under pressure to thrust the piston rod back against the short tappet rod. In moving back, the tappet rod slides through a hole in the rear sight base and a corresponding one in the top of the receiver to strike the bolt carrier.

The claw-like arrangement of the bolt carrier cams the rear end of the bolt upward, unlocking it completely after 7/16" of rearward travel. The kinetic energy imparted to the bolt carrier upon being struck by the tappet rod is sufficient to cause the bolt and bolt carrier to travel together 3 7/8" rearward to extract and eject the fired case and to compress the recoil spring.

The compressed recoil spring forces the bolt and carrier forward to strip a cartridge from the magazine and chamber it. The camming surfaces within the bolt carrier force the rear end of the bolt down into the locked position. When locked, the lower rear end of the bolt butts against a hardened steel crosspiece set within the receiver.

### **Description:**

SKS carbines have been fitted with two different styles of bayonet. The earlier type is 9" in length and resembles a knife blade. The later type is 12" long, and is needle shaped. Both types are attached to the barrel and fold back under the barrel when not in use. The stock and handguard of the Soviet and Eastern bloc carbines are made of laminated beechwood with a hard, waterproof, clear lacquer finish. Chinese-made SKS carbines are usually found with stocks and handguards made of a porous Asian hardwood resembling teakwood, and brushed with an orange colored shellac-type finish. The Chinese SKS is sometimes fitted with a synthetic plastic resin stock and handguard which is molded in a reddish-brown color.

The buttstock of all versions is hollowed out to receive a cleaning kit contained in a steel capsule. The body of the capsule also serves as a handle for the cleaning rod and its lid fastens over the muzzle to protect the rifle during cleaning. Inside the capsule is a bore brush, a cleaning rod extension, and a tool to clear carbon fowling from the gas port. The

capsule lid can also serve as a blank firing device, if properly locked onto the front sight base.

The magazine is unusual and consists of a stamped and welded sheet metal housing, stamped sheet metal floor cap, and a sheet metal follower. Both the follower arm and the floor cap are hinged to the forward end of the magazine body. A coil spring set at the hinge point furnishes sufficient pressure to the follower arm to insure the feeding of cartridges.

The weapon is loaded from above with ten-round stripper clips for which a guide groove has been provided in the forward face of the bolt carrier. It is important to exert thumb pressure against the cartridges as close to the clip as possible, since pressure applied elsewhere makes it difficult to strip the last three rounds. The stripper clip is a one-piece, spring steel stamping - very sturdy and efficient. The magazine can also be loaded with single rounds.

### **Field Stripping:**

To unload the weapon for field stripping, rapid emptying of the magazine is accomplished by holding one hand under the floor cap to catch the loaded rounds as the other hand pulls back the magazine latch. After clearing the chamber and detaching the sling, swing the latch on the right side of the rear sight upward to the first stop.

The gas cylinder-handguard can be removed by lifting up at the rear and withdrawing it from its forward contact with the gas port housing. By swinging the latch up to its second stop, the plunger and spring can be released easily, but maintain thumb pressure against the tappet rod to prevent it from being expelled by the tappet rod spring.

**NEVER, under any circumstances, attempt to fire this weapon with the handguard-gas cylinder removed, or with a defective handguard latch! The gas port is angled to point directly toward the shooters face and severe injury will result from high pressure gas and flame. The handguard-gas cylinder must be firmly latched in place before firing.**

To dismantle the bolt assembly, lower the bolt on the cleared chamber leaving the hammer cocked, and locate the latch on the right rear of the receiver. Rotate this latch until it is upright and pull it out as far as possible. Remove the receiver cover by lifting it and pulling it to the rear. The recoil spring is removed by drawing it rearward out of the bolt carrier. By pulling the charging handle to the rear and upward, the bolt and bolt carrier will be freed from the receiver.

To remove the trigger group, push the safety lever into the "safe" position. Insert the bullet point of a loaded round in the pocket of the spring catch located directly behind the triggerguard and push forward. The trigger group will become unfastened and jump outward, pushed by a coil spring set into the stock beneath the triggerguard.

Swing the trigger group downward and back to remove. Pull the magazine group down and to the rear to release it. Pull the handle of the bayonet towards the blade to unlatch it. Remove the cleaning rod by flexing it slightly to release it from its slot beneath the front

sight. Pivot the bayonet until it locks in the extended position. Grasp the receiver cover latch pin, and use it to lift the receiver up and out of the stock.

By reversing these steps, the weapon can be reassembled. However, the following precautions must be observed. Reseat the fore-end of the stock properly within the barrel band. When replacing the magazine, its forward end must engage the lug extending from the rear sight beneath the barrel.

Hinge the magazine cap upward and hold it in this position while guiding the projecting pins of the trigger group into the receiver lug. Apply pressure to the bottom of the triggerguard; if the trigger group does not lock into place, brace the carbine with one hand and deliver a sharp blow to the triggerguard to insure proper seating. Before installing the trigger group, the hammer must be in the cocked position, and the safety must be engaged.

### **Ammunition:**

Surplus military ammunition from Com Bloc nations is currently banned from importation. Some ammunition imported before this ban is still available. Winchester (USA) and Remington (UMC) supply military ball type ammo in 7.62x39 which is superior to Com Bloc ball. Trajectory data supplied here is generic and presumes a maximum point blank range (bullet remains within 6 inches of line of sight) of 300 yards:

Distance (yards)	25	100	200	300	400	500
Trajectory (inches)	.7	4.7	2.1	-6.1	-26.6	-60

As can be seen from the table, bullet drop makes obtaining hits with the 7.62x39 at ranges beyond 350 yards increasingly difficult. Energy loss also limits effective range.

Identifying Soviet Bloc 7.62 x 39 ammunition:

Designation	Bullet Type	Marking	Round Weight
PS	Ball	none	256.8 gr.
T-45	Tracer	Green	240.7 gr.
Z	Tracer-Incendiary	Red	239.8 gr.
BZ	AP Incendiary	Black & Red	251.5 gr.

---